

Input Pattern (LSBs, 2 bits)				All Frames (Carry)			
00	00	00	00	0	0	0	0
00	00	00	00	0	0	0	0
01	01	01	01	0	1	0	1
01	01	01	01	0	0	0	0
10	10	10	10	0	1	0	1
10	10	10	10	1	0	1	0
11	11	11	11	1	0	1	0
11	11	11	11	1	1	1	1

FIG. 1 (PRIOR ART)

Input Pattern (LSBs, 2 bits)		1st Frame (Carry)		2nd Frame (Carry)		3rd Frame (Carry)		4th Frame (Carry)	
00	00	0	0	0	0	0	0	0	0
00	00	0	0	0	0	0	0	0	0
01	01	1	0	0	1	0	0	0	0
01	01	0	0	0	0	0	1	1	0
10	10	1	0	0	1	1	0	0	1
10	10	0	1	1	0	0	1	1	0
11	11	0	1	1	0	1	1	1	1
11	11	1	1	1	1	1	0	0	1

FIG. 2A (PRIOR ART)

Input Pattern (LSBs, 2 bits)		1st Frame (Carry)		2nd Frame (Carry)		3rd Frame (Carry)		4th Frame (Carry)	
00	00	0	0	0	0	0	0	0	0
00	00	0	0	0	0	0	0	0	0
01	01	1	0	0	0	0	0	0	1
01	01	0	0	0	1	1	0	0	0
10	10	1	0	0	1	1	0	0	1
10	10	0	1	1	0	0	1	1	0
11	11	0	1	1	1	1	1	1	0
11	11	1	1	1	0	0	1	1	1

FIG. 2B (PRIOR ART)

Input Pattern (LSBs, 2 bits)		1st Frame (Carry)		2nd Frame (Carry)		3rd Frame (Carry)		4th Frame (Carry)	
00	00	0	0	0	0	0	0	0	0
00	00	0	0	0	0	0	0	0	0
01	01	1	0	0	0	0	1	0	0
01	01	0	0	1	0	0	0	0	1
10	10	1	0	0	1	1	0	0	1
10	10	0	1	1	0	0	1	1	0
11	11	0	1	1	1	1	0	1	1
11	11	1	1	0	1	1	1	1	0

FIG. 2C (PRIOR ART)

Input Pattern (LSBs, 2 bits)	1st Frame (Carry)	2nd Frame (Carry)	3rd Frame (Carry)	4th Frame (Carry)
00	00	00	00	00
00	00	00	00	00
01	01	01	00	00
01	01	01	01	00
10	10	10	01	01
10	10	10	11	11
11	11	11	01	11
11	11	11	10	01

FIG. 3A

Input Pattern (LSBs,2 bits)	1st Frame (Carry)	2nd Frame (Carry)	3rd Frame (Carry)	4th Frame (Carry)
00	00	00	00	00
00	00	00	00	00
01	01	01	10	00
01	01	01	00	00
10	10	10	00	00
10	10	10	11	10
11	11	11	01	11
11	11	11	10	01

FIG. 3B